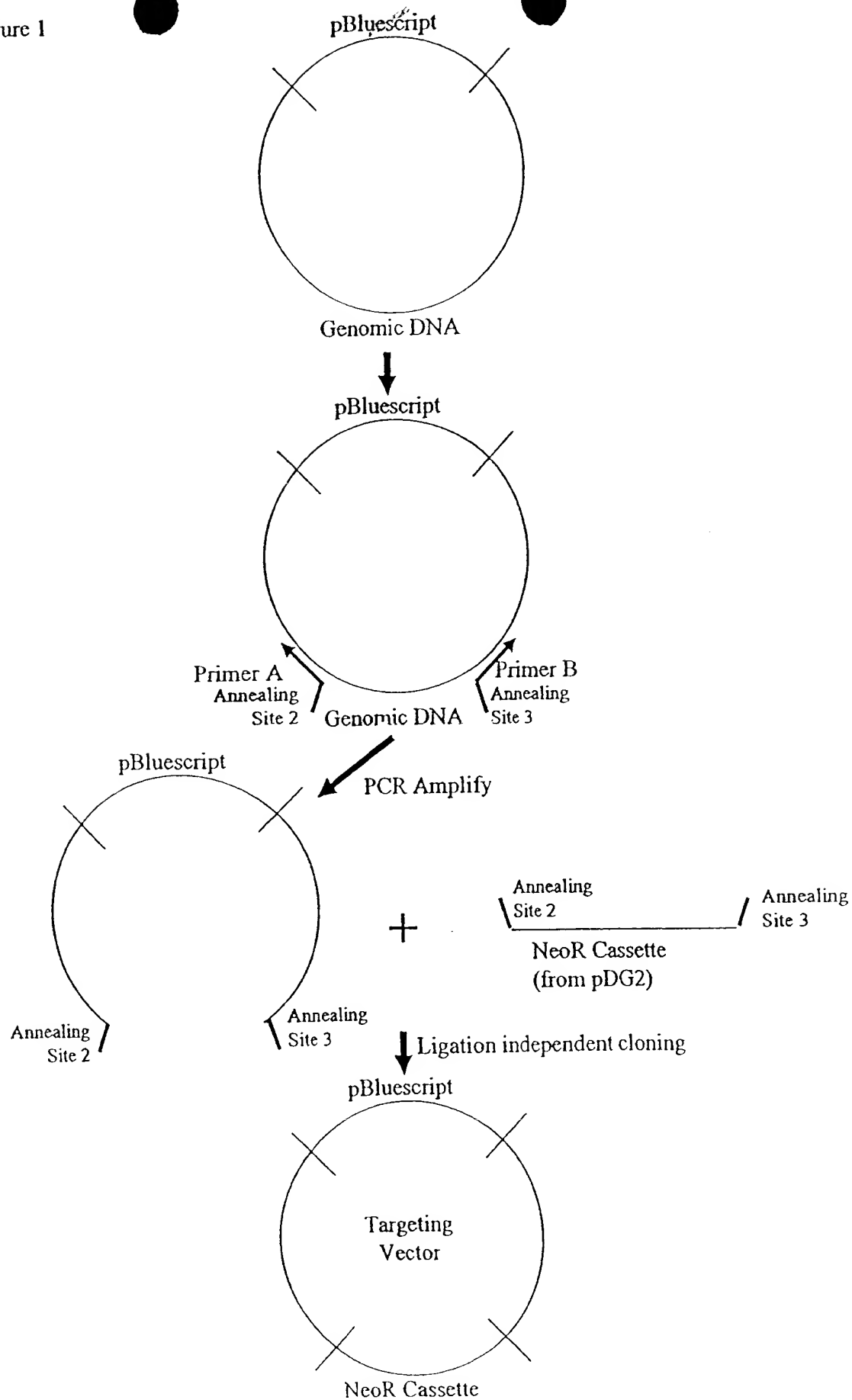


Figure 1



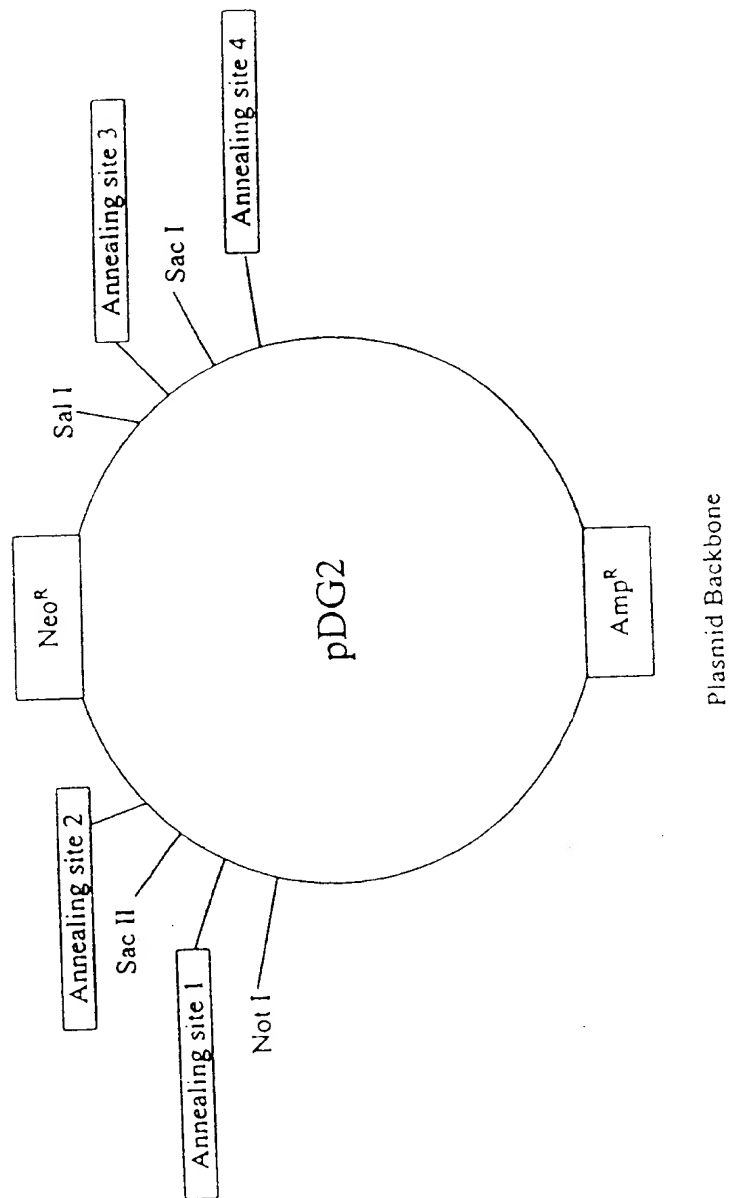


FIGURE 2A

FIGURE 2B

pDG2:
 GTTAACTACGT CAGGTGGCACTTTTCGGGGAATGTGCGGGAACCCCTATTTGTTTATTTTCTAAATACATTCAAATA
 TGTATCCGCTCATGAGACAAATAACCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGTATTCAACATTTT
 CGTGTGCGCCCTTATTCCTTTTTTTCGGGCATTTTGCCTTCTGTTTTTGTCTACCCAGAAACCGTGGTGAAGTAAAGA
 TGCTGAAGATCAGTTGGGTGCAGAGTGGGTACATCGAACTGGATCTCAACAGCGGTAAAGATCCTTGAGAGTTTTGCCC
 CCGAAGAACGTTCTCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGTATTATCCCGTGTGACGCGGGCAA
 GAGCAACTCGGTGCGCGCATACACTATTCTCAGAAATGACTTGGTTGAGTACTCACCAGTCAAGAAAAGCATCTTACGGA
 TGGCATGACAGTAAGAGAATTATGCAGTGTGCGCATTAACCATGAGTGATAAAGTGGCGCAACTTACTTCTGACAAACGA
 TCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCAACAATGGGGGATCATGTAAGTGGCGCTGATCGTTGGGAACCGGAG
 CTGAATGAAGCCATACCAAAACGAGCGGTGACACCAAGTGCCTGTAGCAATGGCAACAACGTTGCGCAAACTATTAAAC
 TGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAAGACTGGATGGAGCGGATAAAGTTGCGAGGACCACTTCTGC
 GCTCGGCCCTTCCGGCTGGCTGGTTTTATTGCTGATAAATCTGGAGCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCA
 CTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGGAGTCAGGCAACTATGGATGAACGAAATAG
 ACAGATCGCTGAGATAGGTGCCTCACTGATTAAAGCATTGGTAACTGTCAGACCAAGTTTACTCATATATACTTTAGATTG
 ATTTACCCCGGTTGATAATCAGAAAAGCCCCAAAAACAGGAAGATTGTATAAGCAAAATATTAAATTGTAAACGTTAATA
 TTTTGTAAAAATTTCGGTTAAATTTTTGTAAATCAGCTCATTTTTTAAACCAATAGGCCGAAATCGGCAAAATCCCTTAT
 AAATCAAAAGAAATAGCCCGAGATAGGGTTGAGTGTGTTCCAGTTTGAACAAGAGTCCACTATTAAAGAACGTTGACTC
 CAACGTCAAAGGGCGAAAAACCGCTATCAGGGCGATGGCCCACTACGTGAACCATCAACCAATCAAGTTTTTGGGGT
 CGAGGTGCGGTAAAGCACTAAATCGGAACCCCTAAAGGGAGCCCGGATTTAGAGCTTGACGGGGAAGCGAACGTTGGCGA
 GAAAGGAAGGGAAGAAAGCGAAAGGAGCGGGCGTAGGGCGCTGGCAAGTGTAGCGGTCAAGCTGCGCGTAAACCCACA
 CCGCGCGCGCTTAATGCGCGCTACAGGGCGGTAAAAGGATCTAGGTGAAGATCCTTTTTGATAATCTCATGACAAAA
 TCCCTTAACGTGAGTTTTCGTTCCTGAGCGTCAAGCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTT
 CTGCGCGTAATCTGCTGCTTCAAAACAAAAAACACCGCTACCAGCGGTGGTTTTGTTTGGCGGATCAAGAGCTACCAAC
 TCTTTTTCCGAAGGTAAGTGGCTTACAGAGCGCAGATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAG
 ACTTCAAGAACTCTGTAGCACCGCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAG
 TCGTGTCTTACCGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGGGCTGAACGGGGGGTTCGTGCAC
 ACAGCCAGCTTGGAGCGAACGACCTACACCGAAGTGAAGTACCTACAGCGTGAAGTATGAGAAAGCGCCACGCTTCCCG
 AAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCGAGGTGCGAACAGGAGAGCGCAGGAGGCTTCCAGGGGGAAC
 GCGTGGTATCTTTATAGTCTGCTGGGTTTCGCCACCTCTGACTTGAGCGTGGATTTTTGTATGCTCGTCAAGGGGGCG
 GAGCCTATGGAAAAACGCCAGCAACGCGGCTTTTTACGGTTCTGGCCTTTTGTGCGCTTTTGTCTCATGTAAATGTG
 AGTTAGCTCACTCATTAGGCACCCAGGCTTTACCTTTATGCTTCCGGCTCGTATGTTGTGTTGAATTTGTGAGCGGATA
 ACAATTTACACAGGAACAGCTATGACCATGATTAGCCCAAGCTACGTAATACGACTCACTAGGCGGCGCGTTTAAAC
 AATGTGCTCCTCTTGGCTTGCTTCCGCGGCGCAAGCCAGACAAGAACAGTTGAGCTCAAGCTTCCCGGACGCGTCT
 AGCGGCGCGCGAAATCTGTCAGGATTGAGGGCCCCCTGCAAGTCAATTTACCGGTTAGGGAGGCGCTTTTCCCAAGG
 CAGTCTGGAGCATGCGCTTTAGCAGCCCGCTGGCACTTGGCGCTACACAAGTGGCTCTGGCTCGCACATTTCCACA
 TCCACCGGTAGCGCCCAACCGGCTCGTCTTGGTGGCCCCCTCGCGCCACCTTCTACTCTCCCTAGTCAGGAAGTTC
 CCCCCCGCCCGCAGCTCGCGTCTGTCAGGACGTGACAAATGGAAGTAGCAGTCTCACTAGTCTCGTGCAGATGGACAG
 CACCGCTGAGCAATGGAAGCGGTAGGCTTTGGGGCAGCGGCAATAGCAGCTTTGCTCCTTCTGCGCTCAGA
 GGCTGGGAAGGGGTGGGTTCGGGGCGGGCTCAGGGGCGGGCTCAGGGGCGGGGCGGGAAGGTCTCCCGAGGCCCC
 GGCATTCTCGCAGCTTCAAAGCGCAGCTCTGCGCGCTGTTCTCTCTCTCATCTCCGGGCTTTGACCTGCAGC
 CAATATGGGATCGGCCATTGAACAAGATGGATTGCAAGCAGGTTCTCCGGCGCTTGGGTGGAGAGGCTATTCCGCTATG
 ACTGGGCACAACAGACAATCGCTGCTCTGATGCGCGGTGTTCCGGCTGTGAGCGCAGGGGCGCCCGGTTCTTTTGTG
 AAGACCGACCTGTCCGGTGCCCTGAATGAAGTGCAGGACGAGGCGCGGCTATCGTGGCTGGCCACGACGGCGTTCC
 TTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGAGTGGTCTATTGGGCGAAGTGCCGGGCGAGGATCTCC
 TGTCTCTCACCTTGCTCCTGCGGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGCTGCATACGCTTGATCCGGCT
 ACCTGCCCATTCGACCACCAAGCGAAACATCGCATCGAGCGAGCACTACTCGATGGAAGCCGCTCTGTGATCAGGA
 TGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCGAAGTGTTCGCCAGGCTCAAGGCGCGCATGCCGACGGCGATG
 ATCTCGTCTGACCATGGCGATGCTGCTTGGCGAATATCATGGTGGAAAAATGGCCGCTTTTCTGGATTCACTGAGTGT
 GGCCGGCTGGGTGGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTTGATTTGCTGAAGAGCTTGGCGCGAATG
 GGCTGACCGCTTCTCTGCTTTACGGTATCGCGCTCCCGATTCCGAGCGCATCGCCTTCTATCGCCTTCTGACGAGT
 TCTTCTGAGGGGATCGATCGCTCTGTAAGTCTGCAGAAATGATGATCTATTAAACAATAAAGATGTCCTAAATGG
 GTGGGGTGGGGTGGGATTAGATAAATGCTGCTTTTACTGAAGGCTTTTACTATTGCTTTATGATAATGTTTCATAG
 TTGGATATCATAATTTAAACAAGCAAAACCAATTAAGGGCCAGCTCATTCTCCCACTCATGATCTATAGATCTATAGA
 TCTCTCGTGGGATCATTGTTTTCTCTGATTCCACITTTGTGGTTCTAAGTACTGGTTTCCAAATGTGTCAGTTTCA
 TAGCCTGAAGAACGAGATCAGCAGCTCTGTTCCACATACACTTCAATCTCAGTATTGTTTGGCAAGTTCTAATTCAT
 CAGAAGCTGACTCTAGATCTGGATCCGGCCAGCTAGGCGCTCGACCTCGAGTGATCAGGTACCAAGGCTCTCGCTCTGTG
 TCCGTTGAGCTCGACGACACAGGACACGCAAAATTAAGGCGGGCCGTACCTCTAGTCAAGGCTTAAAGTGAAGTGTG
 TATTACGAGTGGCGCTGTTTTTACACGCTGTGACTGGGAAAAACCTGGCGTTACCAACTTAATCGCCTTGACGACA
 TCCCCCTTTCCGCGAGCTGGCGTAATAGCGAAGAGGCGCCGACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCG
 AATGGCGCTTCCGTTGTAATAAAGCCGCTTCCGCGGGCTTTTTTTT

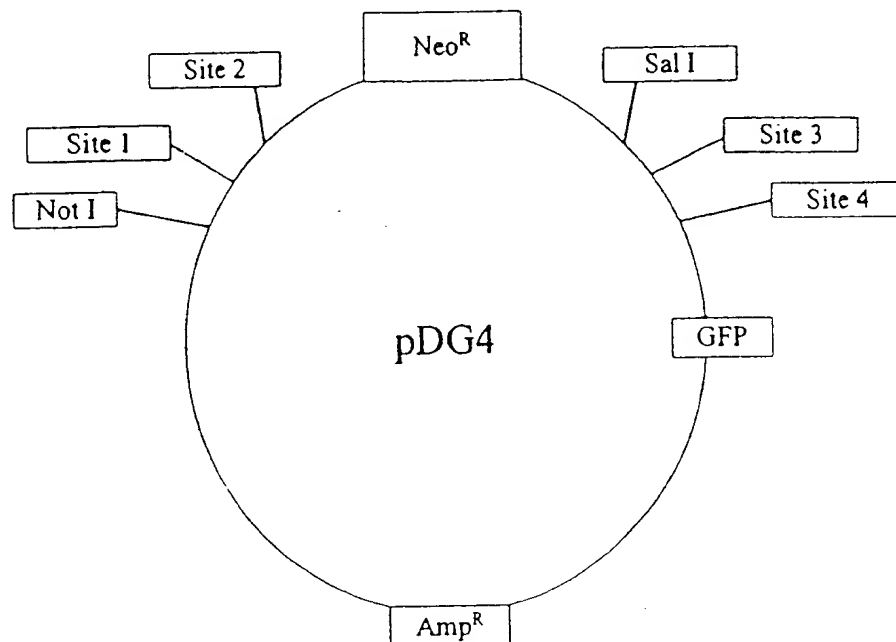


FIGURE 3A

FIGURE 3B

pDG4
 GTTTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCGGGTTACATAACTTACGGTAAATGG
 CCCGCTGGCTGACCGCCCAACGACCCCCGCCCATTTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGA
 CTTTCCAATGACGTCAATGGGTGGAGTATTTACGGTAACTGCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGT
 ACGCCCCCTATTGACGTCAATGACGGAATGGCCCCCTGGCATTAAAGCCAGTACATGACCTTATGGGACTTTCCTAC
 TTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTGGCAGTACATCAATGGGCGTGGATAGC
 GGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTTGACGTCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAG
 TTTCCAAAATGTCGTAACTCCGCCCCATTGACGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAG
 AGCTGGTTTAGTGAAACCGTCAGATCCGCTAGCGCTACCGGTCCGCCCATTTGAGTCAATGGGAGTTTGTTTTGGCACCAAAATCAACGGGAC
 GGTGGTGCCCATCTGGTGGAGCTGGACGGCAGCTAAACGGGCCAAGTTTACGGTGTCCGGCGAGGGCGAGGGCGATG
 CCACCTACGGCAAGCTGACCTGAAGTTTCTGTCACACCGGCAAGCTGCCGTGCCCTGGCCCCACCTCGTGACCACC
 CTGACCTACGGCGTGCAGTGCTTACGGCGTACCCCGACCATGAAGCAGCAGCATTTCTTCAAGTCCGCCATGCCCGA
 AGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCGAGGTGAAGTTGAGGGCG
 ACACCTCGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACCTCTGGGGCAAGCTGGAGTAC
 AACTACAACAGCCCAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAAGTTCAAGATCCGCCACA
 ATCGAGGACGGCAGCGTGCAGCTCGCGACCACTACCAGCAGAACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCG
 ACAACCACTACCTGAGGACCCAGTCCGCCCTGAGCAAGACCCCAACGAGAAGCGCGATCAATGGTCTGCTGGAGTTT
 GTGACCGCGCGGGGATCACTCTCGGCATGGACGAGCTGTACAAGTCCGGACTCAGATCCACCGGATCTAGATAACTGAT
 CATAATCAGCCATACCACATTTGTAGAGGTTTACTTGTCTTAAAAAACCCTCCACACCTCCCCCTGAACCTGAAACATA
 AAATGAATGCAATTGTTGTTGAAGTTTATTGTCAGCTTATAATGGTTACAAATAAAGCAATAGCATCAAAATTTT
 ACAATAAAGCATTTTTTCACTGCATTCTAGTTGTGGTTTGTCCAAACTCATCAATGTATCTTAACCGGAACCTACGTCA
 GGTGGCACTTTTGGGGAAATGTGGCGGAACCCCTATTGTTTATTTTCTAAATACATCTAAATATGTATCCGCTCAT
 GAGACAATAACCTGATAAATGCTTCAATAATATTGAAAAAGGAAGATGATGATTTCAACATTTCCGTGTCGCCCTTA
 TTCCCTTTTTTGGCGCATTTTGCCTTCTGTTTGTCTCACCAGAAACGCTGGTGAAGTAAAGATGCTGAAGATCAG
 TTGGGTGCACGAGTGGGTTACATCGAACTGGATCTCAACAGCGGTAAAGTCTTGAGAGTTTTCGCCCGCAAGAACGTTT
 TCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGTATTATCCCGTGTGACGCGGGCAAGAACCTCGGT
 GCCGCATACACTATTCTCAGAATGACTTGGTTGAGTACTCACCAGTCAAGAAAAGCATTTACGGATGGCATGACAGTA
 AGAGAATTATGCACTGCTGCATTAACCATGAGTGATAACACTGCGGCCAACTTACTTCTGACACGATCGGAGGACCGAA
 GGAGCTAACCGCTTTTTTGCACAACATGGGGGATCATGTAACCTCGCCTGATCGTTGGGAACCGGAGCTGAATGAAGCCA
 TACCAAAACGACGAGCGTGACACCAAGTGGTGGTGAAGTGGCAACCGTTGCGCAAACTATTAACTGGCGAACTACTT
 ACTCTAGCTTCCCGGCAACATTAATAGACTGGATGGAGGCGGATAAAGTTGCGAGGACCACTTCTGCGCTCGGCCCTTCC
 GGCTGGCTGGTTTATTGCTGATAAATCTGGAGCGGTGAGCGTGGGTCTCGCGGTATCATTCAGCAGCTGGGGCAGATG
 GTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGGAGTCAAGCAACTATGGATGAACGAAATAGACAGATCGCTGAG
 ATAGGTGCTCACTGATTAAGCATTGGTAACTGTGACCAAGTTTACTCATATATACTTTAGATTGATTTACCCCGGT
 GATAATCAGAAAAGCCCCAAAAACAGGAAGATTGTATAAGCAAAATATTTAAATTTGTAACGTTAATAATTGTTAAAT
 CGCGTTAAATTTTGTAAATCAGCTCATTTTAAACCAATAGGCGGAAATCGGCAAAATCCCTTATAATCAAAAGAAAT
 AGCCCGAGATAGGGTTGAGTGTGTTCCAGTTTGGAAACAGAGTCCACTATTAAGAAACGTTGGAAGTCCAACTCAAGGG
 CGAAAAACCGTCTATCAGGGCGATGGCCCACTACGTGAACCATCAACCAATCAAGTTTGTGGGGTGGAGTGGCGTAA
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 GTAAGTGGCTTCAAGAGCGCAGATACCAAACTAGTCTTCTAGTGTAGCGTAGTTAGGCGACCACTTCAAGAACTC
 TGTAGCACCGCTACATACCTCGCTGCTAATCCTGTTACCAAGTGGCTGCGGTGCGGTAACCCACACCCCGCGCGTTA
 GGTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGGGCTGAACGGGGGTTCTGTCACAGCCACGCTTG
 GAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCGAAGGGAGAAAGG
 GGACAGGTATCCGGTAAGCGGCGAGGTGGAAACAGGAGAGCGCAGGAGGAGCTTCCAGGGGAAACCGCTGGTATCTTT
 ATAGTCTGTGGGTTTCCGACCTCTGACTTGAGCGTCAATTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGAAA
 AACGCCAGCAACGCGGCTTTTACGCTTCTGGCTTTTGTGCTGCTTGTGTTGGAATTGTGAGCGGATAACAATTTACACA
 ATTAGGCACCCAGGCTTTTACACTTATGCTTCCGGCTCGTATGTTGTGTTGGAATTGTGAGCGGATAACAATTTACACA
 GGAAACAGCTATGACCATGATTACGCAAGCTACGTAATACGACTCACTAGGCGGCGCGTTTAAACAATGTGCTCCTCT
 TTGGCTTGTCTCCGCGGGCAAGCCAGACAAGAACAGTTGACGTCAAGCTTCCCGGACGCGTGTAGCGGCGCGCGGA
 ATCTCTGACGATTTCAGGGGCCCTGCAAGTCAATTCTACCGGTTAGGGGAGGCGCTTTTCCAGGCGAGTCTGGAGCAT
 GCGCTTTAGCAGCCCCGCTGGCACTTGGCGTACACAAGTGGCTTGGCTCGCACACATCCACCGGTAGCG
 CCAACCGGCTCCGTTCTTTGGTGGCCCCCTTCCGCCACCTTCTACTCTCCCTAGTCAGGAAGTTCCCCCGCCCCCG
 AGCTCGCGTGTGACGACGTGACAAATGGAAGTAGCAGTCTCACTAGTCTCGTGAGATGGACAGCACCGCTGAGCAA
 TGAAGCGGGTAGGCTTTGGGGCAGCGGCAATAGCAGCTTTGCTCCTTCTGCTTCTGGGCTCAGAGGCTGGGAAGGG
 TGGGTCCGGGGCGGGCTCAGGGCGGGCTCAGGGCGGGGCGGGCGGAAGGTCTCCGAGGCGCGGCTTCTCGCAC
 GCTTCAAAAGCGCACGTCTGCGCGCTGTTCTCTCTCTCTCATCTCCGGGCTTTGACCTGCAGCCCAATATGGGATCG
 GCCATTGAACAAGATGGATTGACGCGAGTTTCCGGCGGCTTGGGTGGAGAGGCTATTCCGCTATGACTGGGCAACA
 GACAACTCGCTGCTCTGATGCGCGCTGTTCCGGCTGTGACGCGAGGGCGCGGCTTCTTTGTCAAGACCGACCTGT
 CCGGTGCCCTGAATGAATGACGAGCAGGCGAGGCTATCGTGGCTGGCCAGCAGGGCGTCTTCTGCGCAGCTGTG
 CTCGACGTTGCTACTGAAGCGGGAAGGACTGGCTATTGGGCGAAGTGGCGGGCAGGATCTCTGTCTCATCTCACCT

TGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCCGGCGCTGCATACGCTTGATCCGGCTACCTGCCCATTCG
ACCACCAAGCGAAACATCGCATCGAGCGAGCAGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
GAGCATCAGGGGGCTCGCGCCAGCCGAACTGTTCCGAGGCTCAAGGCGCGCATGCCCGACGGCGATGATCTCGTCGTGAC
CCATGGCGATGCCCTGCTTGCCGAATATCATGGTGGAAATGGCCGCTTTCTGGATTATCGACTGTGGCCGGCTGGGTG
TGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
CTCGTGCTTTACGGTATCGCCGCTCCCGATTCCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGGGGA
TCGATCCGTCCTGTAAGTCTGCAGAAATTGATGATCTATTAAACAATAAAGATGTCCACTAAAATGGAAGTTTTCTGT
CATACTTTGTTAAGAAGGGTGAGAACAGAGTACCTACATTTTGAATGGAAGGATTGGAGCTACGGGGGTGGGGTGGGGT
GGGATTAGATAAATGCCTGCTCTTTACTGAAGGCTCTTTACTATTGCTTTATGATAATGTTTCATAGTTGGATATCATAA
TTTAAACAAGCAAAACCAAATTAAGGGCCAGCTCATTCTCCCACTCATGATCTATAGATCTATAGATCTCTCGTGGGAT
CATTTGTTTTCTCTTGATTCCCACTTTGTGGTTCTAAGTACTGTGGTTTCCAAATGTGTGAGTTTCATAGCCTGAAGAAC
GAGATCAGCAGCCTCTGTTCCACATACACTTCATTCTCAGTATTGTTTTGCCAAGTTCTAATCCATCAGAAGCTGACTC
TAGATCTGGATCCGGCCAGCTAGGCCGTGACCTCGAGTGATCAGGTACCAAGGTCCTCGCTCTGTGTCGGTTGAGCTCG
ACGACACAGGACACGCAAAATTAATTAAGGCCGGCCGTACCCTCTAGTCAAGGCCTTAAGTGAGTCGTATTACGGACTGG
CCGTCGTTTTACAACGTCGTGACTGGGAAAACCTGGCGTTACCCAACTTAATCGCCTTGAGCACATCCCCCTTTCCGC
AGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTCGC
TTGGTAATAAAGCCCGCTTCCGGCGGCTTTTTTTT

FIGURE 3B (Continued)

Annealing site	Sequence	Sequence after digestion
1	5' tgtgctcctcttggcttgcttccaa... 3' 3' acacgaggagaaacggaacgaagggtt... 5'	5' tgtgctcctcttggcttgcttccaa... 3' 3' tt... 5'
2	5' ctgggttcttgtctggcttggcccaa... 3' 3' gaccaagaacagacgacgacgggtt... 5'	5' ctgggttcttgtctggcttggcccaa... 3' 3' tt... 5'
3	5' ggctcctcgctctgtgtccggttgaa... 3' 3' ccaggagcgagacacaggcaactt... 5'	5' ggctcctcgctctgtgtccggttgaa... 3' 3' tt... 5'
4	5' ttgcggtgtcctgtgtcgtcgaa... 3' 3' aaacgcacaggacacagcagcgtt... 5'	5' ttgcggtgtcctgtgtcgtcgaa... 3' 3' tt... 5'

FIGURE 4

Annealing site	Sequence	Sequence after digestion
1	5' AAtgtgctcctcttcttggcttgcttCCGC 3' 3' Ttacacgaggagaaacccgaacgaagg 5'	5' AA 3' 3' Ttacacgaggagaaacccgaacgaagg 5'
2	5' AActggttcttctgtctggttggtggCCCCGC 3' 3' Ttgaccaagaacagacagaccgaaccggg 5'	5' AA 3' 3' Ttgaccaagaacagacagaccgaaccggg 5'
3	5' AAggtcctcgctctctgtgtccggttGAGCT 3' 3' Ttccaggagcgagacacagggcaac 5'	5' AA 3' 3' Ttccaggagcgagacacagggcaac 5'
4	5' AAttgctgtgtcctgtgtgtcgtcGAGCT 3' 3' Ttaaacgcacaggaacacagcagc 5'	5' AA 3' 3' Ttaaacgcacaggaacacagcagc 5'

FIGURE 5

FIGURE 6

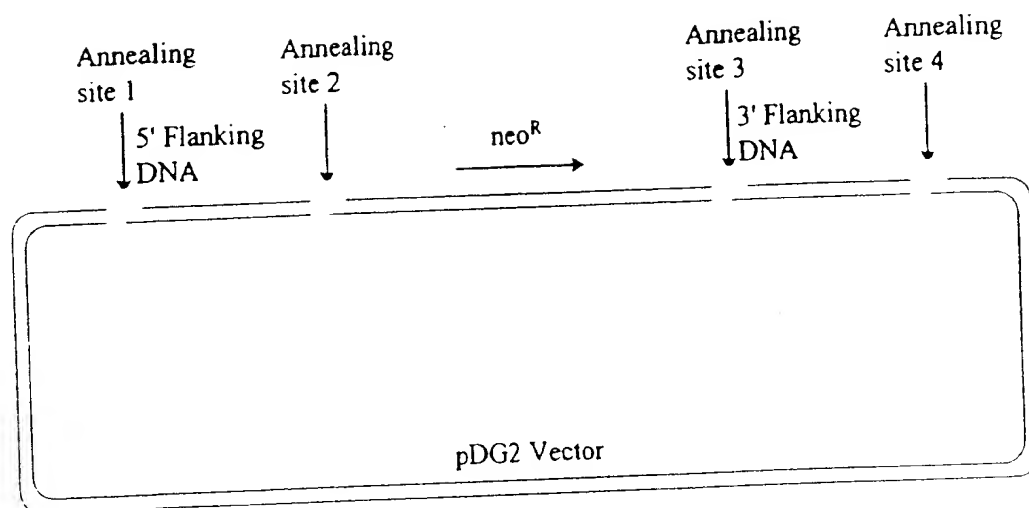
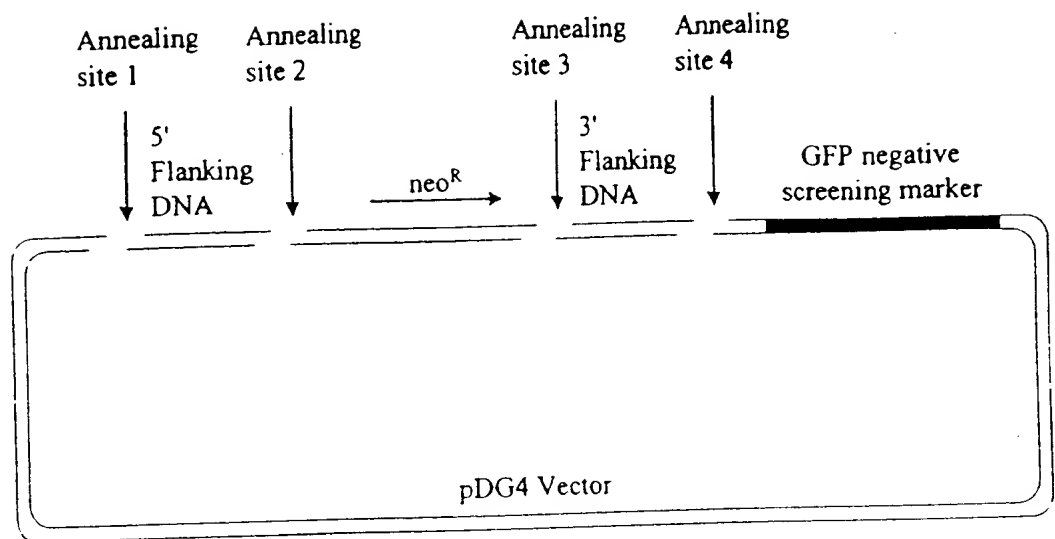


FIGURE 7



TTCCTGACAAGACTATGTCCACTCAGGAGCCCCAGAAGAGTCTTCTGGGTTCTCTCAACTCCAATGCCAC
 CTCTCACCTTGGACTGGCCACCAACCAGTCAGAGCCTTGGTGCCTGTATGTGTCCATCCCAGATGGCCTC
 TTCCTCAGCCTAGGGCTGGTGAGTCTGGTGGAGAATGTGCTGGTTGTGATAGCCATCACCACCAACCGCA
 ACCTGCACTCGCCCATGTATTACTTCATCTGCTGCTGGCCCTGTCTGACCTGATGGTAAGTGTGAGCAT
 CGTGCTGGAGACTACTATCATCTGCTGCTGGAGGTGGGCATCCTGGTGGCCAGAGTGGCTTTGGTGCAG
 CAGCTGGACAACCTCATTGACGTGCTCATCTGTGGCTCCATGGTGTCCAGTCTCTGCTTCCTGGGCATCA
 TTGCTATAGACCGCTACATCTCCATCTTCTATGCGCTGCGTTATCACAGCATCGTGACGCTGCCAGAGC
 ACGACGGGCTGTCTGGGCATCTGGATGGTCAGCATCGTCTCCAGCACCTCTTTATCACCTACTACAAG
 CACACAGCCGTTCTGCTCTGCCTCGTCACTTTCTTTCTAGCCATGCTGGCACTCATGGCGATTCTGTATG
 CCCACATGTTACAGAGAGCGTGCCAGCACGTCCAGGGCATTGCCAGCTCCACAAAAGGCGGCGGTCCAT
 CCGCCAAGGCTTCTGCCTCAAGGGTGTGCGCACCTTACTATCCTTCTGGGGATTTTCTTCTGTGCTGG
 GGCCCTTCTTCTGCTCTCTTGCTCATCGTCTGCGCTCAGCACCCACCTGCAGCTGCATCTTCA
 AGAAGTTCAACCTCTTCTCCTCCTCATCGTCTCAGCTCCACTGTTGACCCCTCATCTATGCTTTCCG
 CAGCCAGGAGCTCCGCATGACACTCAAGGAGGTGCTGCTGTGCTCCTGGTGATCAGAGGGCGCTGGGCAG
 AGGGTGACAGTGATATCCAGTGGCCTGCATCTGTGAGACCACAGGTACTCATCCCTTCTGATCTCCATT
 TGTCTAAGGGTCGACAGGATGAGCTTTAAATAGAAACCCAGAGTGCCTGGGGCCAGGAGAAAGGTAAC
 TGTGACTGCAGGGCTCACCCAGGGCAGCTACGGGAAGTGGAGGAGACAGGGATGGGAACTCTAGCCCTGA
 GCAAGGGTCAGACCAGGCTCCTGAAGAGCTCACCTCTCCCCACCTACAGGCAACTCCTGCTCAAGCC
 (SEQ ID NO: 19)

Targeting Vector (5' arm; 200 bp flanking neo insert):

CCGACAACAACATGAAGTGAATCAGAAGCTGGGGGCTGATACCACCTGGAGCTGCAG
 CCTCCACAGACCGCTTCCTACTTCCTGACAAGACTATGTCCACTCAGGAGCCCCAGAA
 GAGTCTTCTGGGTTCTCTCAACTCCAATGCCACCTCTCACCTTGGACTGGCCACCAACC
 AGTCAGAGCCTTGGTGTCTGTATGTG (SEQ ID NO: 20)

Targeting Vector (3' arm; 200 bp flanking neo insert):

GACTACTATCATCTGCTGCTGGAGGTGGGCATCCTGGTGGCCAGAGTGGCTTTGGTG
 CAGCAGCTGGACAACCTCATTGACGTGCTCATCTGTGGCTCCATGGTGTCCAGTCTCT
 GCTTCTGGGCATCATTGCTATAGACCGCTACATCTCCATCTTCTATGCGCTGCGTTAT
 CACAGCATCGTGACGCTGCCAGAG (SEQ ID NO: 21)

FIG. 8